UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

March 1, 2006

Erika McConnell
Municipality of Anchorage
Physical Planning Department
P.O. Box 196650
Anchorage, AK 99519-6650

Dear Ms. McConnell:

The National Marine Fisheries Service (NMFS) has reviewed the Municipality of Anchorage's (MOA) Public Review Draft #2 of the Title 21 Land Use Planning section of the Municipal Code of Ordinances Update, as part of the implementation of "Anchorage 2020, the Anchorage Bowl Comprehensive Plan." The purposes of the code rewrite are to modernize Anchorage's land use regulations to include development techniques and design standards; to make the code more useable and easier to understand; and to implement recently adopted plans and policies. The basic structure of Title 21 is essentially the same as it was when first adopted by the Greater Anchorage Area Borough in 1969. As a result of the MOA being unified in 1975, the City and Borough Codes were blended into the current Municipal Code of Ordinances, including Title 21, which was adopted in 1977. Since then, there have been numerous specific amendments to Title 21 provisions. However, these have been done on an as-needed basis, without an evaluation of the overall Title as to its organization, need for updating, or ease of use by the general public. Over time, some of the provisions have become dated, and cross-referencing of information has become cumbersome and difficult for users, particularly for those not familiar with Title 21.

Anchorage 2020, the Anchorage Bowl Comprehensive Plan introduces planning principles and policies which Title 21 currently is not equipped to handle. As a result, some elements of Title 21 are contrary to the policies of the comprehensive plan. For example, policies promoting mixed-use development in certain areas of the Bowl such as Major Employment Centers, Redevelopment/Mixed Use Areas, or Town Center areas cannot easily be achieved in these areas with current commercial zoning regulations. Due to the disparity between the Title's provisions and the new comprehensive plan policies, the MOA has determined that an overall diagnostic review of Title 21 is necessary, followed by a rewrite of the overall Title, the scope of which will be determined through the diagnostic analysis and public comment.

NMFS offers the enclosed comments on the proposed Title 21 revisions. If you have any questions or need additional information, please contact Ms. Erika Ammann in our Anchorage office at (907) 271-5006.

Sincerely,

Robert D. Mecum
Acting Administrator, Alaska Region

Enclosure

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National Marine Fisheries Service
Comments on Proposed Revisions to Title 21
March 1, 2006

Specific Comments on Chapter 21.07: Development and Design Standards

Section 21.07.020

The stream systems within the MOA provide important habitat for several species of salmon. Streams with undercut banks, overhanging brush, and sunken root wads or logs provide excellent protection and good sources of food. NMFS supports the 100 foot setback from the ordinary high water mark of streams or river corridors required for development in Rl-4 zoned areas. A setback of this size allows continued stream functions including stabilization of the stream bank, which lessens bank erosion while allowing for lateral movement of the stream; maintaining water quality by acting as a filter for sediment and nutrients from runoff; and maintaining healthy stream temperatures, allowing for aquatic invertebrates and vegetation to thrive, which then leads to further improvements in water quality. When a stream system has good water quality and is supporting primary vegetative and invertebrate life, the chances that the stream can repair itself after periodic events such as flooding or even accidental urban pollution increases.

Currently the 100 foot setback is only mandatory for the RL-4 zoning district with smaller setbacks of 50 feet, and 25 feet for all other zonings excluding those under wetlands legislation. While 100 feet is preferable to the smaller setbacks, similar distances for setbacks are the norm in city planning. Most examples are from cities much larger than the MOA, and very few have the option of protecting salmon bearing streams within their municipality. When instituting the smaller setbacks the sensitivity of the stream should be taken into account to ensure that stream function is not lost with the smaller setback area. For example, planners should identify the movement of the stream by identifying side channels that may currently be dry but could be reconnected during the spring snow melt. In these cases it would be important to maintain the periodic use of the side channel.

In addition to establishing setbacks, there is a need to investigate the quality of the land used for the setback. Vegetative cover, slope of the bank, and enforcement of stated setbacks are important elements for success. Furthermore, conservation of stream function does not end at the setback and should include rules for land use beyond the setback (storage of toxics, storm water runoff, septic systems, etc.).

Vegetative cover is an important factor in the effectiveness of a stream buffer. Root systems of trees provide bank stability as well as minimizing stream lateral movement. Without adequate trees and root systems the lateral movement of the stream can cause more problems to development by meandering than if forested land on either side is left untouched to reign in the stream. Vegetative cover also is integral to the processes that can convert potential pollutants into nutrients usable by the aquatic system as well as controlling sediment input into the stream system. Native vegetation surrounding streams should also be protected in the designated setback area to reap the full beneficial effects of the setback. In areas where trails will be built within the setback, care should be taken to limit planting non-native plants, especially lawn –type grasses and plants needing

fertilization. Also setback size can be variable for different vegetative growth. Adequate protection of the stream bank may be offered by 25 feet of alder and willow but the same protection would not be produced by 25 feet of wild grasses.

Slope of the bank should also be considered a special scenario when determining setback area. With increasing slopes, bank stability decreases and water flow increases, leading to decreased filtering ability of the vegetation, which has less contact time with the water to extract nutrients. Two methods recognized on the Stormwater Manager's Resource web site offer guidance in adjusting setbacks to account for increasing slopes[1]:

Method A:

Percent Slope	Width of Buffer
15%-17%	add 10 feet
18%-20%	add 30 feet
21%-23%	add 50 feet
24%-25%	add 60 feet

Method B:

Percent Slope	Type of Stream Use	
	Water Contact Recreational Use	Sensitive Stream Habitat
0 to 14%	no change	add 50 feet
15 to 25%	add 25 feet	add 75 feet
Greater than 25%	add 50 feet	add 100 feet

[1] http://www.stormwatercenter.net/Model%20Ordinances/buffer_model_ordinance.htm The Stormwater Manager's Resource Center (SMRC) web site is made possible through a grant from the Environmental Protection Agency, Office of Water, Office of Wastewater Management, Assistance Agreement #828077-01. The SMRC site is managed and published by the Center for Watershed Protection, Inc., a 501(c)3 organization located in Ellicott City, Maryland.

Additionally, enforcement of stated setbacks is a concern in the Anchorage area. Initially, enforcement should involve a component of public education. Also, it would be helpful if the code identified the ownership of the setback land as either public or private property. Actual enforcement need not be burdensome, and could be performed by periodic stream walks to monitor setbacks, issuing fines for encroachment on these setbacks and ensuring that the fines are substantial enough so that paying the fine would be more costly to a developer than the benefits reaped by ignoring the setback. Other options could include establishment of a call in line to report illegal encroachments on setbacks.

While setbacks are important, what is just beyond the setback also needs regulation. This includes increases in distance from a stream for storage of toxic materials, raised septic systems or drainage fields from septic systems, storm water runoff, etc. Every area will have different development pressures but it is important to acknowledge that consideration of the stream can not end at the border of the setback.

Section 21.07.040

In this section on drainage, stormwater runoff, and erosion control, NMFS recommends including the use of swales for control of stormwater runoff in developed areas. In new development projects, developers often are allowed to leave large sections of land that will become lawns unvegetated until the lot is purchased by the homeowner. During this period water runoff from these land segments can greatly increase the sediment load in nearby streams. To deter this practice, developers can be required to stabilize the area to control erosion.

Another effective method to reduce turbidity in streams from stormwater runoff that should be incorporated in new development areas is the use of settling ponds. The ponds themselves can create public areas while allowing for sediments to settle out of the water column prior to reaching the stream.

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